

**ABSTRACT**

The present disclosure relates to a data storage device, comprising a plurality of electron emitters adapted to emit electron beams, the electron emitters each having a planar emission surface, and a storage medium in proximity to the electron emitter,  
5 the storage medium having a plurality of storage areas that are capable of at least two distinct states that represent data, the state of the storage areas being changeable in response to bombardment by electron beams emitted by the electron emitters.